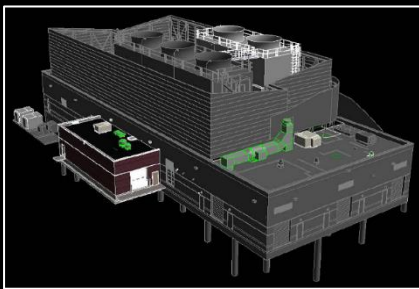


- **Owner:**
The Pennsylvania State University
- **Services:**
Structural & Site Engineering
- **Construction Cost:**
\$5,500,000
- **Year Completed:**
2012



West Campus Chiller Plant Expansion



The Pennsylvania State University, University Park, PA

Stahl Sheaffer provided design and documentation of a building addition, sump piers and maintenance, bathroom framing, additional concrete pads, VFD room framing, hard points above chillers, and new cooling tower installation. Stahl Sheaffer engineers created a 3D coordinated BIM model in Revit of new and existing conditions. An elevated steel platform was designed to support the rooftop cooling towers. Stahl Sheaffer performed an analysis of the existing building's structural system and the proposed platform's connection to the existing roof framing. The analysis for both the existing structure and steel platform was aided by 3-D BIM software to effectively design the

proposed steel platform to withstand gravity, wind, and vibration loads from the proposed towers.

Additional design was required for the proposed acoustic and screen wall enclosures for the chillers. Stahl

Sheaffer designed a 30' tall steel framework to extend from the existing roof to support these panels and withstand the region's wind loading requirements.



Stahl Sheaffer also provided civil engineering and site design assistance for the Landscape Building addition to the plant,

working closely with the Borough of State College to obtain the required zoning and land development approvals. The approval process included submissions to the Borough's Design Review Board to ensure that the project met specific neighborhood and aesthetic considerations. Site design for the new building addition included enhanced landscaping to provide buffering from the adjacent residential neighborhood. Engineering services included the re-

routing of an existing stormwater collection system for the building downspouts. Stahl Sheaffer evaluated the impact of the new impervious surfaces on the existing drainageway leading to the West Campus Pond.

